

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P241584

Luminaire Tested: **FVS8M-3-LD4-50-2HI-O-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P241584
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1711-410-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS8M-3-LD4-50-2HI-O-UNV-EDC1
Description: FAILSAFE FVS8M LED FIXTURE
3FT LENGTH, 2-MODULE LED WITH OPAL LENS
Light Source: (168) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

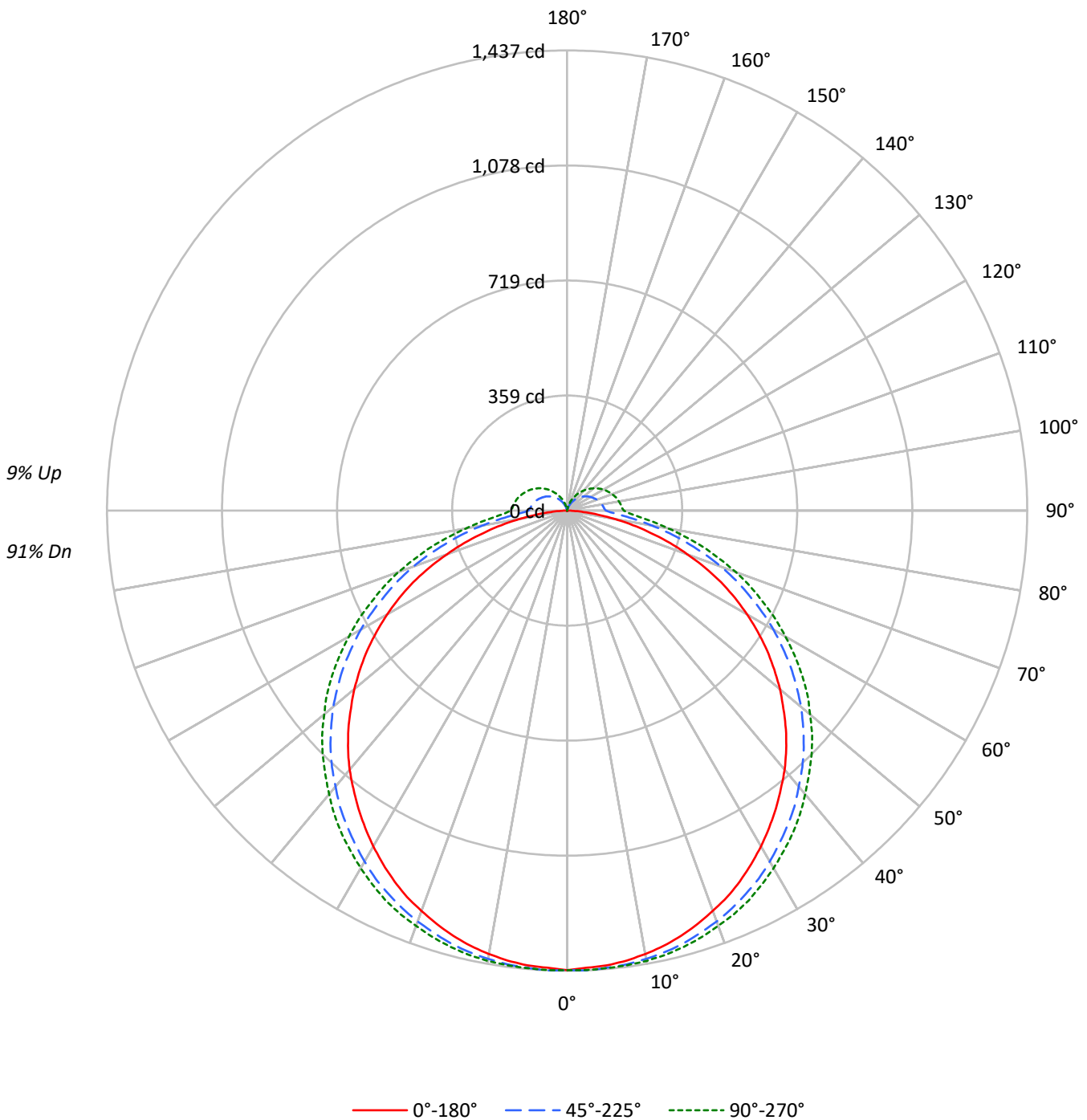
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5052.0 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.33 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.65' x L: 2.85' x H: 0.15')
CIE Type: Direct

Input Watts (W): 69.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





TEST NUMBER: P241584

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	106	101	96	92	102	97	93	89	92	88	85	86	83	81	81	79	77	74
2	96	87	80	74	92	84	78	72	79	74	69	75	70	66	70	67	64	61
3	87	76	67	61	84	74	66	59	69	63	57	65	60	55	62	57	53	51
4	79	67	58	51	76	65	57	50	61	54	48	58	52	47	55	50	45	43
5	73	60	50	43	70	58	49	43	55	47	42	52	45	40	49	44	39	37
6	67	53	44	38	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	40	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8380	8380	8380
5°	8320	8259	8243
10°	8262	8148	8143
15°	8199	8041	8039
20°	8115	7921	7924
25°	8037	7797	7826
30°	7928	7667	7692
35°	7823	7524	7566
40°	7723	7367	7411
45°	7590	7218	7273
50°	7427	7024	7087
55°	7233	6785	6893
60°	6962	6494	6609
65°	6605	6102	6274
70°	5995	5668	5895
75°	5143	5029	5386
80°	3906	4275	4738
85°	2157	3507	4202



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.3	2.7
10°-20°	394.2	7.8
20°-30°	606.4	12.0
30°-40°	746.7	14.8
40°-50°	798.3	15.8
50°-60°	752.3	14.9
60°-70°	610.3	12.1
70°-80°	395.0	7.8
80°-90°	180.5	3.6
90°-100°	111.5	2.2
100°-110°	98.9	2.0
110°-120°	81.6	1.6
120°-130°	61.8	1.2
130°-140°	41.9	0.8
140°-150°	23.9	0.5
150°-160°	10.2	0.2
160°-170°	2.3	0.0
170°-180°	0.0	0.0
0°-30°	1136.9	22.5
0°-40°	1883.5	37.3
0°-60°	3434.1	68.0
0°-90°	4619.8	91.4
90°-120°	292.0	5.8
90°-150°	419.6	8.3
90°-180°	432.0	8.6
0°-180°	5052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1435	1435	1435	1435	1435	
5°	1426	1428	1433	1435	1434	135
15°	1375	1383	1400	1408	1410	388
25°	1277	1294	1321	1335	1343	588
35°	1137	1166	1200	1223	1229	711
45°	966	1002	1045	1069	1080	745
55°	762	803	853	883	895	680
65°	530	574	627	664	674	523
75°	271	324	386	422	440	288
85°	51	106	170	211	225	63
90°	1	56	121	163	177	3
95°	1	52	114	156	170	0
105°	1	46	105	145	158	1
115°	1	38	92	128	140	1
125°	1	31	77	108	120	1
135°	1	23	60	86	96	1
145°	1	12	42	62	69	1
155°	1	5	22	37	42	0
165°	2	1	6	12	16	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1
2.5°	1428.9	1429.9	1429.9	1429.9	1431.0	1432.0	1433.1	1435.1	1436.2	1437.2	1437.2
5°	1425.8	1425.8	1425.8	1425.8	1426.8	1427.9	1429.9	1431.0	1432.0	1433.1	1433.1
7.5°	1417.5	1418.5	1418.5	1418.5	1419.5	1420.6	1421.6	1424.7	1426.8	1427.9	1428.9
10°	1406.0	1408.1	1408.1	1408.1	1409.1	1411.2	1412.3	1415.4	1418.5	1420.6	1421.6
12.5°	1392.5	1392.5	1393.5	1393.5	1396.7	1397.7	1400.8	1405.0	1407.1	1410.2	1412.3
15°	1374.8	1375.9	1375.9	1376.9	1381.1	1383.1	1385.2	1389.4	1394.6	1396.7	1399.8
17.5°	1354.0	1355.1	1357.1	1358.2	1362.3	1365.5	1367.5	1372.7	1377.9	1381.1	1383.1
20°	1330.1	1332.2	1333.2	1336.3	1341.5	1344.7	1346.7	1353.0	1358.2	1361.3	1365.5
22.5°	1306.2	1306.2	1308.3	1312.4	1317.6	1321.8	1324.9	1330.1	1336.3	1339.5	1344.7
25°	1277.1	1277.1	1280.2	1285.4	1290.6	1293.7	1296.8	1304.1	1311.4	1316.6	1320.7
27.5°	1244.8	1245.9	1250.0	1255.2	1261.5	1266.7	1268.7	1277.1	1283.3	1290.6	1295.8
30°	1210.5	1213.6	1217.8	1223.0	1231.3	1235.5	1239.6	1246.9	1254.2	1261.5	1265.6
32.5°	1174.1	1176.2	1183.5	1188.7	1197.0	1202.2	1206.3	1214.7	1221.9	1228.2	1233.4
35°	1136.7	1138.7	1145.0	1152.3	1161.6	1165.8	1168.9	1179.3	1188.7	1194.9	1200.1
37.5°	1096.1	1100.3	1105.5	1112.7	1124.2	1128.3	1132.5	1141.9	1151.2	1157.5	1165.8
40°	1056.6	1057.6	1063.9	1074.3	1083.6	1086.7	1093.0	1104.4	1111.7	1120.0	1125.2
42.5°	1012.9	1014.0	1020.2	1030.6	1040.0	1046.2	1052.4	1062.8	1071.1	1079.5	1086.7
45°	966.1	969.2	975.5	985.9	995.2	1002.5	1007.7	1019.2	1028.5	1035.8	1045.2
47.5°	916.2	920.4	927.6	938.0	948.4	955.7	960.9	971.3	982.8	991.1	999.4
50°	867.3	872.5	878.8	890.2	900.6	907.9	912.0	923.5	933.9	944.3	953.6
52.5°	815.3	819.5	827.8	839.2	849.6	856.9	861.1	874.6	886.0	894.4	902.7
55°	762.3	766.4	774.8	785.2	797.6	802.8	809.1	822.6	833.0	843.4	852.8
57.5°	706.1	711.3	719.6	731.1	742.5	747.7	754.0	766.4	780.0	789.3	797.6
60°	648.9	652.0	660.4	673.9	684.3	690.5	697.8	709.2	722.8	733.2	744.6
62.5°	590.7	593.8	602.1	615.7	628.1	632.3	640.6	654.1	664.5	678.0	686.4
65°	530.4	534.5	542.9	552.2	567.8	574.1	580.3	593.8	605.3	616.7	627.1
67.5°	466.9	469.0	481.5	492.9	503.3	512.7	520.0	533.5	546.0	558.5	570.9
70°	400.4	405.6	416.0	429.5	442.0	450.3	455.5	471.1	484.6	500.2	510.6
72.5°	336.9	344.2	354.6	366.1	378.5	388.9	395.2	408.7	422.2	435.7	448.2
75°	271.4	279.7	291.2	303.7	317.2	324.5	334.9	348.4	361.9	374.4	385.8
77.5°	210.1	215.3	229.8	242.3	258.9	265.2	271.4	287.0	300.5	314.1	327.6
80°	149.8	156.0	168.5	183.0	198.6	204.9	213.2	227.7	242.3	255.8	268.3
82.5°	96.7	103.0	113.4	127.9	143.5	150.8	159.1	173.7	189.3	202.8	215.3
85°	51.0	56.2	67.6	82.2	97.8	106.1	112.3	129.0	141.4	158.1	169.5
87.5°	18.7	22.9	33.3	49.9	64.5	73.8	80.1	95.7	110.2	123.8	137.3
90°	1.0	7.3	18.7	33.3	48.9	56.2	64.5	80.1	94.6	108.2	120.6
92.5°	0.0	5.2	16.6	30.2	45.8	54.1	61.4	75.9	90.5	104.0	116.5
95°	1.0	5.2	15.6	29.1	44.7	52.0	60.3	74.9	88.4	101.9	114.4
97.5°	0.0	4.2	14.6	28.1	42.6	51.0	58.2	72.8	87.4	99.8	112.3
100°	1.0	4.2	13.5	27.0	41.6	48.9	56.2	70.7	85.3	97.8	110.2
102.5°	0.0	4.2	13.5	26.0	40.6	47.8	55.1	68.6	82.2	95.7	107.1
105°	1.0	3.1	12.5	25.0	38.5	45.8	53.0	66.6	80.1	92.6	105.0
107.5°	0.0	3.1	11.4	23.9	37.4	43.7	51.0	64.5	78.0	90.5	101.9
110°	1.0	3.1	11.4	22.9	35.4	42.6	48.9	62.4	74.9	87.4	98.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	2.1	10.4	21.8	34.3	40.6	46.8	60.3	72.8	84.2	95.7
115°	1.0	2.1	9.4	20.8	32.2	38.5	44.7	57.2	69.7	81.1	91.5
117.5°	1.0	2.1	9.4	18.7	31.2	36.4	42.6	55.1	66.6	78.0	88.4
120°	1.0	2.1	8.3	17.7	29.1	34.3	40.6	52.0	63.4	74.9	84.2
122.5°	1.0	1.0	7.3	16.6	27.0	33.3	38.5	49.9	60.3	70.7	81.1
125°	1.0	1.0	6.2	15.6	26.0	31.2	36.4	46.8	57.2	67.6	77.0
127.5°	1.0	1.0	6.2	14.6	23.9	29.1	34.3	43.7	54.1	63.4	72.8
130°	1.0	1.0	5.2	12.5	21.8	27.0	31.2	41.6	51.0	60.3	68.6
132.5°	1.0	1.0	4.2	11.4	19.8	25.0	29.1	38.5	47.8	56.2	64.5
135°	1.0	1.0	4.2	10.4	18.7	22.9	27.0	35.4	43.7	52.0	60.3
137.5°	1.0	1.0	3.1	8.3	15.6	19.8	23.9	32.2	40.6	47.8	55.1
140°	1.0	1.0	2.1	7.3	13.5	17.7	21.8	29.1	37.4	44.7	51.0
142.5°	1.0	1.0	2.1	6.2	12.5	15.6	18.7	26.0	33.3	40.6	46.8
145°	1.0	1.0	2.1	5.2	10.4	12.5	15.6	21.8	29.1	35.4	41.6
147.5°	1.0	1.0	1.0	4.2	8.3	10.4	13.5	18.7	25.0	31.2	36.4
150°	1.0	1.0	1.0	3.1	7.3	9.4	11.4	15.6	20.8	26.0	31.2
152.5°	1.0	1.0	1.0	2.1	5.2	7.3	9.4	13.5	17.7	21.8	26.0
155°	1.0	1.0	1.0	2.1	4.2	5.2	7.3	10.4	14.6	17.7	21.8
157.5°	1.0	1.0	1.0	2.1	3.1	4.2	5.2	8.3	10.4	13.5	17.7
160°	1.0	1.0	1.0	1.0	2.1	3.1	4.2	5.2	8.3	10.4	12.5
162.5°	2.1	2.1	1.0	1.0	2.1	2.1	3.1	4.2	5.2	7.3	9.4
165°	2.1	2.1	2.1	1.0	1.0	1.0	2.1	3.1	4.2	5.2	6.2
167.5°	2.1	2.1	2.1	2.1	1.0	1.0	1.0	1.0	2.1	3.1	3.1
170°	2.1	2.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	2.1
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1	1435.1
2.5°	1437.2	1437.2	1437.2	1437.2	1437.2	1437.2	1437.2	1437.2	1436.2	1436.2
5°	1433.1	1433.1	1434.1	1435.1	1435.1	1435.1	1435.1	1434.1	1434.1	1434.1
7.5°	1428.9	1431.0	1432.0	1432.0	1432.0	1432.0	1433.1	1433.1	1432.0	1432.0
10°	1422.7	1423.7	1425.8	1426.8	1426.8	1426.8	1426.8	1427.9	1427.9	1427.9
12.5°	1414.3	1415.4	1416.4	1418.5	1418.5	1419.5	1420.6	1419.5	1421.6	1420.6
15°	1400.8	1403.9	1406.0	1407.1	1408.1	1408.1	1409.1	1410.2	1410.2	1410.2
17.5°	1386.3	1388.3	1391.5	1393.5	1393.5	1395.6	1394.6	1396.7	1397.7	1396.7
20°	1367.5	1370.7	1373.8	1375.9	1377.9	1377.9	1379.0	1380.0	1380.0	1380.0
22.5°	1347.8	1350.9	1354.0	1357.1	1358.2	1359.2	1361.3	1362.3	1362.3	1363.4
25°	1323.9	1328.0	1332.2	1334.3	1335.3	1337.4	1338.4	1339.5	1340.5	1342.6
27.5°	1298.9	1303.1	1307.2	1310.3	1310.3	1313.5	1315.5	1316.6	1316.6	1316.6
30°	1270.8	1275.0	1278.1	1283.3	1283.3	1284.3	1286.4	1289.5	1288.5	1289.5
32.5°	1239.6	1244.8	1249.0	1251.1	1254.2	1256.3	1256.3	1259.4	1261.5	1259.4
35°	1206.3	1211.5	1216.7	1219.9	1223.0	1223.0	1227.1	1227.1	1229.2	1229.2
37.5°	1172.0	1176.2	1181.4	1184.5	1187.6	1190.7	1192.8	1192.8	1193.9	1194.9
40°	1132.5	1137.7	1145.0	1150.2	1151.2	1152.3	1155.4	1156.4	1158.5	1156.4
42.5°	1093.0	1099.2	1105.5	1110.7	1110.7	1113.8	1115.9	1117.9	1119.0	1117.9
45°	1050.3	1058.7	1062.8	1069.1	1069.1	1072.2	1074.3	1078.4	1079.5	1079.5
47.5°	1005.6	1012.9	1020.2	1026.4	1026.4	1029.6	1030.6	1033.7	1034.8	1037.9
50°	960.9	968.2	973.4	980.7	981.7	983.8	986.9	989.0	990.0	990.0
52.5°	913.1	919.3	925.6	930.8	934.9	934.9	940.1	941.2	942.2	946.4
55°	862.1	869.4	875.6	882.9	882.9	885.0	888.1	890.2	893.3	895.4
57.5°	808.0	815.3	824.7	827.8	832.0	834.0	838.2	839.2	840.3	842.4
60°	752.9	761.2	767.5	773.7	776.8	778.9	782.0	785.2	787.2	787.2
62.5°	697.8	703.0	712.4	719.6	721.7	725.9	728.0	730.0	732.1	733.2
65°	638.5	646.8	656.2	661.4	664.5	664.5	669.7	673.9	672.8	673.9
67.5°	579.3	588.6	594.9	602.1	605.3	608.4	613.6	614.6	617.7	618.8
70°	517.9	529.3	536.6	541.8	547.0	546.0	553.3	554.3	557.4	559.5
72.5°	458.6	466.9	477.3	482.5	485.7	487.7	491.9	495.0	495.0	497.1
75°	397.3	405.6	413.9	422.2	422.2	428.5	432.6	436.8	436.8	439.9
77.5°	335.9	348.4	356.7	361.9	366.1	369.2	372.3	377.5	376.5	377.5
80°	277.7	288.1	296.4	304.7	307.8	310.9	314.1	318.2	320.3	321.3
82.5°	224.6	235.0	244.4	251.7	254.8	258.9	264.1	267.3	268.3	271.4
85°	179.9	190.3	199.7	208.0	211.1	213.2	218.4	221.5	223.6	224.6
87.5°	148.7	159.1	168.5	175.8	178.9	182.0	187.2	190.3	193.4	193.4
90°	132.1	142.5	151.8	159.1	163.3	166.4	171.6	174.7	176.8	176.8
92.5°	127.9	137.3	146.6	153.9	158.1	161.2	165.4	168.5	171.6	171.6
95°	125.8	136.2	144.6	151.8	156.0	159.1	163.3	167.4	169.5	169.5
97.5°	123.8	134.2	142.5	149.8	153.9	157.0	161.2	164.3	166.4	167.4
100°	120.6	131.0	140.4	147.7	150.8	153.9	159.1	162.2	164.3	164.3
102.5°	118.6	127.9	137.3	144.6	147.7	150.8	155.0	159.1	160.2	161.2
105°	115.4	124.8	134.2	141.4	144.6	147.7	151.8	155.0	157.0	158.1
107.5°	112.3	121.7	130.0	137.3	140.4	143.5	148.7	151.8	153.9	153.9
110°	109.2	118.6	126.9	133.1	137.3	139.4	144.6	147.7	149.8	149.8



TEST NUMBER: P241584

CATALOG NUMBER: FVS8M-3-LD4-50-2HI-O-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	105.0	114.4	122.7	129.0	132.1	135.2	139.4	142.5	144.6	145.6
115°	101.9	110.2	118.6	124.8	127.9	131.0	135.2	138.3	140.4	140.4
117.5°	97.8	106.1	113.4	120.6	123.8	125.8	130.0	133.1	135.2	136.2
120°	93.6	101.9	109.2	115.4	118.6	120.6	124.8	127.9	130.0	131.0
122.5°	89.4	97.8	105.0	111.3	113.4	115.4	119.6	122.7	124.8	125.8
125°	85.3	92.6	99.8	106.1	108.2	110.2	114.4	117.5	118.6	119.6
127.5°	81.1	88.4	94.6	100.9	103.0	105.0	109.2	111.3	113.4	114.4
130°	75.9	83.2	89.4	94.6	97.8	99.8	103.0	106.1	107.1	108.2
132.5°	71.8	78.0	84.2	89.4	91.5	93.6	97.8	99.8	101.9	101.9
135°	66.6	72.8	79.0	84.2	86.3	88.4	91.5	93.6	94.6	95.7
137.5°	62.4	68.6	73.8	78.0	80.1	82.2	85.3	87.4	88.4	89.4
140°	57.2	62.4	67.6	71.8	73.8	75.9	79.0	81.1	82.2	82.2
142.5°	52.0	57.2	62.4	66.6	68.6	69.7	72.8	73.8	74.9	75.9
145°	47.8	52.0	56.2	60.3	62.4	63.4	65.5	67.6	68.6	68.6
147.5°	42.6	46.8	51.0	54.1	56.2	57.2	59.3	61.4	62.4	62.4
150°	36.4	41.6	44.7	47.8	49.9	51.0	53.0	54.1	55.1	55.1
152.5°	31.2	35.4	39.5	42.6	43.7	44.7	46.8	47.8	48.9	48.9
155°	26.0	29.1	33.3	36.4	37.4	38.5	39.5	40.6	41.6	41.6
157.5°	20.8	23.9	27.0	30.2	31.2	32.2	33.3	34.3	34.3	35.4
160°	15.6	17.7	20.8	23.9	25.0	26.0	27.0	27.0	28.1	28.1
162.5°	11.4	13.5	15.6	17.7	17.7	19.8	20.8	21.8	21.8	21.8
165°	7.3	9.4	10.4	11.4	12.5	13.5	14.6	14.6	15.6	15.6
167.5°	4.2	5.2	6.2	7.3	7.3	8.3	8.3	9.4	9.4	9.4
170°	2.1	2.1	3.1	3.1	3.1	3.1	4.2	4.2	4.2	5.2
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)